DRAFT

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended): A method of displaying nodes within a network topology, the method using a processor coupled to a display screen, the method comprising:

forming a first layer of a multi-layer representation wherein at least two nodes of the network topology are represented separately;

grouping the nodes of the first layer into group nodes to form a second layer in the multi-layer representation;

grouping the group nodes of the second layer into a third layer, the third layer having at least one connected-superset node containing group nodes with nodes connected to each other, and at least one isolated-superset node containing group nodes having nodes not physically communicatively connected to each other or to the nodes of the connected-superset node; and

displaying the superset nodes of in the third layer so the connected-superset node is separate from the isolated-superset node to show a lack of connection and such that the connected-superset node is selectively expandable to display group nodes and connections between the nodes, and the isolated-superset node is selectively expandable to display group nodes of the second layer.

Claim 2 (original): The method of claim 1, wherein the step of forming comprises a step of creating a graph of nodes to be displayed in the network as a leaf graph.

Claim 3 (original): The method of claim 2, wherein the leaf graph includes components and interconnection paths of the network.

Claim 4 (original): The method of claim 1 wherein the group nodes in the connected-superset node are laid out according to layout rules.

2

DRAFT

Claim 5 (original): The method of claim 4 wherein the group nodes in the connected-superset node comprises any one or more of switch groups and host groups.

Claim 6 (original): The method of claim 5 wherein a layout rule consists of the switch group with the highest connectivity being placed in the center of the connected-superset node.

Claim 7 (original): The method of claim 1 wherein the connected-superset node is fully expandable while the isolated-superset node is minimized.

Claim 8 (original): The method of claim 1 wherein the isolated-superset node comprises any one or more of unmapped hubs and isolated switches.

Claim 9 (original): The method of claim 1 wherein the isolated group node consists of isolated devices other than unmapped hubs and isolated switches.

Claim 10 (currently amended): A method of displaying nodes within a network topology, the method using a processor coupled to a display screen, the method comprising:

forming a first layer of a multi-layer representation wherein at least two nodes of the network topology are represented separately;

grouping the nodes of the first layer into group nodes to form a second layer in the multi-layer representation;

grouping the group nodes of the second layer into a third layer, the third layer having at least one connected-superset node containing group nodes with nodes connected to each other, but not connected to any other nodes belonging to other connected-superset nodes; and

displaying the connected-superset node in the third layer in a display such that the connected-superset node is selectively expandable to display group nodes and connections between the nodes in the display.

3

DRAFT

Claim 11 (original): The method of claim 10 wherein grouping the group nodes of the second layer into a third layer further comprises, the third layer having at least one isolated-superset node containing group nodes having nodes isolated from each other; and

displaying the superset nodes in the third layer so the connected-superset node is separate from the isolated-superset node and such that the connected-superset node is selectively expandable to display group nodes and connections between the nodes, and the isolated-superset node is selectively expandable to display group nodes of the second layer.

Claim 12 (currently amended): A computer-based method for graphically displaying a network, comprising:

forming a first layer of a multilayer representation of the network including representations of a plurality of nodes, the first layer including components and interconnections of the network;

forming a second layer of the multilayer representation by grouping the plurality of nodes into two or more group nodes based on grouping criteria;

forming a third layer of the multilayer representation by grouping the group nodes into sets of nodes, wherein the sets of nodes are not ~~physically~~ communicatively connected; and

displaying the multilayer representation including the nodes, the group nodes, and the sets of nodes and the interconnections, wherein the group nodes in the second layer can be expanded to selectively display one or more of the plurality of nodes and the sets of nodes in the third layer can be expanded to selectively display one or more of the group nodes in the multilayer representation.

Claim 13 (previously presented): The method of claim 12, wherein the grouping criteria are based on functional relationships.

Claim 14 (previously presented): The method of claim 13, wherein the functional relationships are defined to not require physical proximity in the network.

4

Claim 15 (previously presented): The method of claim 12, further including during the expansion of the group nodes, continuing to display connections of the displayed nodes to remaining ones of the group nodes that have not been expanded.

Claim 16 (previously presented): The method of claim 12, wherein the sets of nodes include a connected-superset node comprising the nodes connected to each other and an isolated-superset node comprising a set of the nodes not connected to other ones of the nodes.

Please add the following new claims:

Claim 17 (new): A computer-readable medium storing computer-executable instructions for performing a computer process for displaying nodes, group nodes, superset nodes and any interconnections in a multi-layer representation of a network topology, the computer process comprising:

forming a first layer by populating the first layer with a plurality of nodes and a plurality of interconnections, wherein each node represents a device in the network topology and each interconnection represents a connection between devices;

forming a second layer by grouping the plurality of nodes and a plurality of interconnections in the first layer into a plurality of group nodes;

forming a third layer by grouping the plurality of group nodes in the second layer into a plurality of superset nodes, wherein the plurality of superset nodes comprise at least one connected-superset node having associated group nodes with nodes coupled to each other and at least one isolated-superset node having associated group nodes having nodes not communicatively coupled to each other or to the nodes of the connected-superset node; and

displaying the plurality of superset nodes of the third layer such that the connected-superset node is separate from the isolated-superset node, wherein the connected-superset node is expandable to display the associated group nodes and the isolated-superset node is expandable to display the associated group nodes.

5

Claim 18 (new): The computer-readable medium of claim 17 wherein the computer process further comprises:

gathering the physical layout of the network topology, wherein the physical layout comprises a plurality of devices and a plurality of connection paths of the network.

Claim 19 (new): The computer-readable medium of claim 18 wherein the computer process further comprises:

displaying connections between group nodes and displaying connections between nodes within each group node.

Claim 20 (new): The computer-readable medium of claim 17 wherein the computer process further comprises:

displaying the plurality of superset nodes, wherein the connected-superset node is collapsible to display a single representation of the connected superset node and the isolated-superset node is collapsible to display a single representation of the isolated-superset node.

Claim 21 (new): The computer-readable medium of claim 17 wherein the computer process further comprises:

displaying the plurality of group nodes of the second layer, wherein the plurality of group nodes are expandable to display the nodes of the first layer that correspond to the respective group node while continuing to display connections between the displayed nodes and unexpanded group nodes.

Claim 22 (new): The computer-readable medium of claim 21 wherein the computer process further comprises:

displaying the plurality of group nodes of the second layer, wherein the nodes of the first layer that correspond to the respective group node is collapsible to display a single representation of the group node.

6

DRAFT

Claim 23 (new): The computer-readable medium of claim 17 wherein the computer process further comprises:

      creating a first grid for each superset node of the third layer; and

      populating the first grid with group nodes from the second layer.

Claim 24 (new): The computer-readable medium of claim 23 wherein the computer process further comprises:

      creating a second grid for each group node of the second layer; and

      populating the second grid with nodes from the first layer.

7